Amendment to the Claims:

Please amend the claims as follows.

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for identifying a molecule that modulates transcription comprising

(a) providing a quadruplex DNA; and, a candidate quadruplex DNA-binding molecule, wherein the quadruplex DNA comprises the nucleotide sequence ~~$(GGA)_4$ (SEQ ID NO:1) or the nucleotide sequence~~ $(GGA)_3GG$ (SEQ ID NO:2), and G is guanine and A is adenine, and the quadruplex DNA is in a heptad/tetrad conformation;

(b) contacting the quadruplex DNA with the candidate quadruplex DNA-binding molecule, whereby the contacting occurs in a cell; and

(c) determining the presence or absence of an interaction between the candidate quadruplex DNA-binding molecule and the quadruplex DNA, whereby the candidate molecule that interacts with the quadruplex DNA is identified as a molecule that modulates the transcription.

Claim 2 (currently amended): The method of claim 1, wherein the quadruplex DNA comprises

$(GGA)_4AGA(GGA)_3GGC$ (SEQ ID NO:15);

$(GGA)_4$ (SEQ ID NO:1);

$AGAGAAGAGG(GGA)_5GAGGAGGAGGCGC$ (SEQ ID NO:16);

~~GGAGGGGGAGGGG (SEQ ID NO:17);~~

$AGGAGAA(GGA)_2GGT(GGA)_3G_3$ (SEQ ID NO:18);

~~$(GGA)_3AGAATGCGA(GGA)_2G_3AGGAG$ (SEQ ID NO:19);~~

$CCGAA(GGA)_2A(GGA)_3G_4$ (SEQ ID NO:20); and

~~$(GGA)_2CCGA(GGA)_2$ (SEQ ID NO:25);~~

~~$GGAA(GGA)_3$ (SEQ ID NO:23);~~

~~AGAAGAG(GGA)$_3$G (SEQ ID NO:22);~~

AGCGA(GGA)$_8$GAGGAA (SEQ ID NO:21);

or a combination thereof.

Claim 3 (previously presented): The method of claim 1, wherein the quadruplex DNA comprises a native quadruplex DNA sequence.

Claim 4 (cancelled)

Claim 5 (currently amended): The method of claim 1 [[4]], wherein the quadruplex DNA comprises a gene transcription regulatory nucleotide sequence found in native quadruplex DNA.

Claim 6 (cancelled)

Claim 7 (previously presented): The method of claim 1, wherein the quadruplex DNA comprises a mutation that hinders formation of another quadruplex conformation.

Claim 8 (previously presented): The method of claim 1, wherein the quadruplex DNA is coupled to a reporter expression system.

Claim 9 (original): The method of claim 8, wherein the reporter expression system comprises a luciferase reporter.

Claim 10 (previously presented): The method of claim 1, wherein the presence or absence of an interaction is assayed by a Taq polymerase arrest assay.

Claim 11 (original): The method of claim 1, wherein the interaction is a binding interaction.

Claims 12-18 (cancelled)

Claim 19 (currently amended): A method for identifying the presence or absence of a quadruplex structure in a nucleic acid of a sample, comprising

(a) providing a sample comprising a nucleic acid; and, a quadruplex-interacting agent, wherein the quadruplex-interacting agent binds to a quadruplex structure in a heptad/tetrad conformation;

(b) contacting the sample with the quadruplex-interacting agent, whereby the contacting occurs in a cell; and

(c) detecting the presence or absence of an interaction between the nucleic acid quadruplex structure and the quadruplex-interacting agent, whereby the presence of an interaction is indicative the presence of the quadruplex structure in the nucleic acid.

Claim 20 (previously presented): The method of claim 19, wherein the quadruplex-interacting agent comprises TMPyP4 or telomestatin.

Claim 21 (previously presented): The method of claim 19, wherein the quadruplex-interacting agent binds to the quadruplex structure in a native heptad/tetrad conformation.

Claims 22-26 (cancelled)

Claim 27 (previously presented): A method for identifying a molecule that modulates the biological activity of a native quadruplex DNA, which comprises

contacting a test quadruplex DNA with a candidate molecule, wherein the test quadruplex DNA comprises the nucleotide sequence AGAGAAGAGG$(GGA)_5$GAGGAGGAGGCGC (SEQ ID NO:16), and wherein G is guanine and A is adenine; and determining the presence or absence of an interaction between the candidate molecule and the test quadruplex DNA, whereby the candidate molecule that interacts with the test quadruplex DNA is identified as the molecule that modulates the biological activity of the native quadruplex DNA.

Claim 28 (previously presented): The method of claim 27, wherein the test quadruplex DNA further comprises a nucleotide sequence comprising $(GGA)_4AGA(GGA)_3GGC$ (SEQ ID NO:15); $(GGA)_4$ (SEQ ID NO:1); GGAGGGGGAGGGG (SEQ ID NO:17); $AGGAGAA(GGA)_2GGT(GGA)_3G_3$ (SEQ ID NO:18); $(GGA)_3AGAATGCGA(GGA)_2G_3AGGAG$ (SEQ ID NO:19); $CCGAA(GGA)_2A(GGA)_3G_4$ (SEQ ID NO:20); $(GGA)_2CCGA(GGA)_2$ (SEQ ID NO:25); $GGAA(GGA)_3$ (SEQ ID NO:23); $AGAAGAG(GGA)_3G$ (SEQ ID NO:22); $AGCGA(GGA)_8GAGGAA$ (SEQ ID NO:21); or a combination thereof.

Claim 29 (previously presented): A method for identifying a nucleotide sequence capable of forming a quadruplex structure, which comprises identifying in a database a subset of nucleotide sequences comprising $AGAGAAGAGG(GGA)_5GAGGAGGAGGCGC$ (SEQ ID NO:16).

Claim 30 (previously presented): A method for identifying a nucleotide sequence capable of forming a quadruplex structure, which comprises contacting a cell with a quadruplex interacting agent, identifying a subset of RNA nucleotide sequences increased or decreased 2-fold or more in the cell as compared to a cell not contacted with the quadruplex interacting agent, and identifying a nucleotide sequence from the subset comprising $AGAGAAGAGG(GGA)_5GAGGAGGAGGCGC$ (SEQ ID NO:16) as the nucleotide sequence capable of forming a quadruplex structure.

Claim 31 (previously presented): A method for identifying the presence or absence of a quadruplex structure in a nucleic acid of a sample, comprising

(a) providing a sample comprising a nucleic acid comprising $AGAGAAGAGG(GGA)_5GAGGAGGAGGCGC$ (SEQ ID NO:16); and, a quadruplex-interacting agent, wherein the quadruplex-interacting agent binds to a quadruplex structure in a heptad/tetrad conformation;

(b) contacting the sample with the quadruplex-interacting agent; and

(c) detecting the presence or absence of an interaction between the nucleic acid quadruplex structure and the quadruplex-interacting agent, whereby the presence of an interaction is indicative the presence of the quadruplex structure in the nucleic acid.